RESEARCH ON METHODS – Study Design

PRM209
HOW ARE CENTRES INCLUDED IN RANDOMISED CONTROLLED TRIALS WITH PARALLEL ECONOMIC EVALUATIONS IN THE UK?

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OBJECTIVES: The sample of centres participating in randomised controlled trials (RCTs) may affect the generalisability of economic evaluation results if it is biased, but there is limited evidence on how trialists currently include centres in RCTs. Our aim was to investigate the reported rationales for centre selection in RCTs with parallel economic evaluations in the UK. **METHODS:** We systematically reviewed and meta-summarised centre selection information in full-length protocols of RCTs with parallel economic evaluations funded by the UK National Institute of Health Research – Health Technology Assessment programme (NIHR-HTA) and initiated between January 2005 and January 2012. Free text information on centre selection was extracted, abstracted and categorised; effect sizes (%) were calculated for the emerging categories as a measure of prevalence relative to the number of included studies. **RESULTS:** Of 365 reviewed studies, 129 trial protocols were included in the systematic review with a total target sample size of 317,000 participants. The meta-summary identified 53 centre selection considerations, grouped under three categories: diversity and representativeness, centre characteristics and trial participation. A total of 78 (60%) protocols provided a rationale for centre selection. A total of 31 (24%) protocols explicitly considered representativeness, for example in terms of the target population (11%) and delivered services (12%). Fifty-seven (44%) protocols required particular centre characteristics, such as size (17%) and research experience (15%). Thirty-seven (29%) protocols envisaged considerations that would ensure successful trial participation, such as the willingness to participate (7%) and ensuring recruitment (13%). **CONCLUSIONS:** The rationale for centre selection in RCTs with parallel economic evaluations is currently underreported in trial protocols. Centres are primarily enrolled on pragmatic grounds and less so with a view to ensuring generalisability. There are little reasons to believe that economic results from RCTs are informed by a representative sample of centres, thus questioning the representativeness of their findings.

PRM210
RECRUITING PATIENTS WITH A RARE BLOOD DISORDER AND THEIR CAREGIVERS THROUGH SOCIAL MEDIA

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OBJECTIVES: Recruiting research participants with experiences relevant to rare diseases (patients and caregivers) remains a constant challenge. Researchers often rely on patient advocacy or support groups as well as clinician referrals, which each present unique recruitment issues. Social media sites, such as Facebook, can potentially be helpful in recruiting patients for many study types, particularly those involving hard-to-reach populations. However, little is known about the value of social media in recruiting populations with rare medical conditions. In this study, Facebook was used to recruit adult patients and parents of children with hemophilia A for participation in a Web-based survey. **METHODS:** A cross-sectional study was developed to better understand patient and caregiver experiences and behaviors associated with treatments for hemophilia A. Members of three local or national blood disorder organizations in the United States and Canada were invited to complete a Web-based survey via postings on each organizations' Web site and/or e-mail invitations sent to each organizations' member lists. Additionally, two organizations posted advertisements about the study on their respective Facebook pages. A nominal donation was made to each organization for their assistance in study recruitment. **RESULTS:** Of the 145 individuals who responded to survey invitations, 101 (70%) completed the survey questionnaire. More than half (58%) of the completed questionnaires were from respondents recruited through Facebook who were a mean age of 35.8 years (SD = 8.3), similar to those recruited through more standard methods. The organization that did not post a study advertisement on Facebook recruited the fewest participants (only 13% of the total respondents). **CONCLUSIONS:** This real-world study emphasizes the assistance and value of social media in study recruitment. Use of social media in recruiting can be an efficient means of reaching large numbers of potential respondents.

PRM211
THE EFFECTS OF EXCLUDING TREATMENTS FROM NETWORK META-ANALYSIS

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OBJECTIVES: To investigate the effect of omitting treatments from network meta-analyses on overall treatment effects and treatment rankings. **METHODS:** We selected published network meta-analyses that met the following criteria: compared t≥5 treatments, had ≥2 loops, ≥2tstudies and set to determine treatment superiority. If multiple published analyses considered the same treatments (e.g. multiple networks pertaining to COPD drugs), the larger network was selected. We defined a node's connectivity as its number of edges. Each network was analyzed systematically with the removal of one node at a time. Nodes that were in ≥50% of studies were not removed. Impact of node exclusion was measured using the relative change in treatment effect estimates, changes in the top-three ranked treatments, and changes in probabilities of being the best treatment. Relative changes in effect size were expressed as fold-deviations. For each network with excluded node(s), we measured the maximum and geometric mean of fold-changes. **RESULTS:** In total, 19 networks were selected for analysis. Approximately half the networks had average fold-change larger than 1.10 (greater than 10% relative change in treatment effects). Approximately half of the networks also had changes in the top three ranks and substantial changes in treatment rank probabilities. Within these networks, the maximum fold-change was generally larger than 1.25. In networks with no changes in top-three ranked treatments, the 'best' treatment mostly had probability ≥70% of being the best. Two features were consistent across the nodes leading to the largest change in probabilities and effects: they were among the most connected nodes and tended to have a 0% probability of being the best treatment. **CONCLUSIONS:** Network meta-analytic methods are still in their infancy. Our results suggest that failing to include one or more treatments within a network can lead to important changes in conclusions reached.

PRM212
USING AN ONLINE DATA ANALYTIC TOOL TO INFORM STUDY DESIGNS FOR CHRONIC DISEASE POPULATIONS: A CASE STUDY WITH CLL

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OBJECTIVES: Chronic lymphocytic leukemia (CLL) accounts for almost 40% of all leukemias. Current treatments have high rates of adverse events requiring hospitalization. With promising treatments on the horizon, the need for well-designed studies of treatment patterns and adverse events will increase. Designing studies can be challenging given the long-term nature of CLL. This study uses an online analytic tool to explore the necessary observation period to accurately assess treatment and hospitalization rates. **METHODS:** Using the Treatment Pathways tool and data from an 8-year oncology subset of the 2004 – 2012 MarketScan®databases, we identified patients with two plus claims for CLL, one year prior enrollment, no prior treatment. Four follow-up groups were assessed: 1, 2, 3, and 4 years of continuous enrollment (CE). For each CE, we identified patients treated with bendamustine (B), or fludarabine, rituximab, and/or cyclophosphamide (F/R/C). Treatment and hospitalization rates and the time between diagnosis, treatment, and hospitalization were calculated. **RESULTS:** A total of 4886 patients met all inclusion criteria; 3348 had 1 year, 2201 had 2 years, 1451 had 3 years, and 874 had 4 years CE. Bendamustine use increased from 4% among those with 1 year CE to 5% for all other CE groups. F/R/C use increased from 21% among those with 1 year to 27% among those with 4 years CE. Hospitalization rates increased from 41% to 49% for bendamustine, and 38% to 44% for F/C/R from 1 year to 4 years CE. Among those with 4 yrs CE, median time to first treatment was 4.3 years for bendamustine, 1.4 years for F/C/R; median time to first hospitalization was 96 and 365 days, respectively. **CONCLUSIONS:** This study used an online tool to quickly assess the impact of various CE criteria. The data demonstrate how shorter CE underestimates treatment, related hospitalizations, and overall burden of illness in a chronic population.

PRM213
USING REAL-WORLD CLAIMS DATA FOR PLANNING ONCOLOGY CLINICAL TRIALS

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OBJECTIVES: To understand the value of quickly estimating the impact of certain inclusion/exclusion criteria on a potential clinical trial population using real-world administrative data. **METHODS:** Using the Treatment Pathways tool and data from an 8-year oncology subset of the 2004 – 2012 MarketScan®databases, we identified patients with castrate-resistant prostate cancer (CRPC) with at least six months of history. From these patients, we identified cohorts with definitive exclusions (brain metastasis or other primary cancer) and time-dependent exclusions (based on radiation or treatments). Seven of 12 exclusion criteria were identifiable within the claims database. **RESULTS:** Inclusion criteria identified 2,329 patients with CRPC based on two prostate cancer diagnoses, medical or surgical castration and receipt of docetaxel. Of them, 1370 (59%) had 6 months of follow-up data for evaluation of exclusion criteria. Among the 1370 patients, 248 (18%) met none of the exclusion criteria, while 482 patients (35%) had brain metastasis and/or other cancers. The remaining 640 (47%) had at least one time-dependent exclusion, including 534 receiving corticosteroids, 136 receiving androgen receptor and reductase inhibitors, 86 receiving radiation and 31 with ketoconazole. These patients could be trial-eligible depending on the timing of treatment cessation and trial recruitment. **CONCLUSIONS:** This study demonstrates a method to understand the impact of specific inclusion/exclusion criteria on a potential clinical trial population in just a few hours using an online pathway creation tool and administrative data representing millions of patients. Using this method, trial planners can evaluate different scenarios to quickly and easily determine estimated attrition rates helping them to maximize potential recruitment success. Limitations exist due to the timing of exclusions and data on lab results included in the exclusion criteria that were unavailable in this subset of claims data.

PRM214
USE OF A NOVEL ADJUNCTIVE CLINICAL TRIAL DESIGN TO EXAMINE EFFICACY, SAFETY OF ARMODAFINIL FOR THE TREATMENT OF BIPOLAR I DEPRESSION

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OBJECTIVES: Patients in randomized, controlled trials of bipolar depression are generally not representative of a clinical population. This study attempted to examine a large sample of patients more representative of patients seen in clinical practice. This report presents baseline patient characteristics from a